RESTRICTED CIRCULATION

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AGRICULTURAL MEMORANDUM NO 377

FORECASTING SEASONAL TOTALS OF GRAMINEAE POLLEN USING WEATHER DATA

L P SMITH

Ag Mem 376 provided a pollen forecast by mid June. An attempt can be made by the end of May using temperature data.

If T is sum of mean daily temperatures (^{o}C) at Kew for April and May then total pollen count (in 100s) = 12T - 214.

Results

Year	Total Pollen (100s)		Severity	
	Actual	Estimated	Forecast	Actual
1964	85	75	Severe	Severe
1961	64	66	Severe	Severe
1966	50	46	Mod	Mod
1965	42	56	Severe	Mod
1962	41	25	Light	Mod
1969	40	33	Light	Mod
1967	35	32	Light	Light
1963	31	42	Mod	Light
1970	29	36	Light	Light
1968	27	33	Light	Light

Correct 6.

This forecast performance is as good as that based on the 300 pollen date made up to a fortnight later.

This forecast can be improved by using the total pollen trapped in May (M)

Then seasonal total = 6.4T + 8M - 106 in units of 100 for pollen totals

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Results

Year	T	M	Pollen Actual	Pollen Estimate	Severity Forecast	Severity Actual
1964	24.1	3.6	85	77	Severe	Severe
1961	23.3	2.1	64	60	Severe	Severe
1966	21.7	2.5	50	53	Mod	Mod
1965	22.5	1.9	42	53	Mod	Mod
1962	19.9	0.6	41	26	Light	Mod
1969	20.6	2.5	40	46	Mod	Mod
1967	20.5	0.8	35	32	Light	Light
1963	21.3	0.4	31	33	Light	Light
1970	20.8	0.3	29	29	Light	Light
1968	20.6	0.7	27	31	Light	Light

Correct Forecasts 9

1962, the only wrongly forecast year, had 8.7 hours per day sunshine at Kew in June.

Any comment or criticism on this paper should be referred to the Author.

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